SONY

4-433-082-**12**(1)

LCD TV

Operating Instructions

Start-up Guide

Watching TV

Using Optional Equipment

Using MENU Functions

Network Set-up

Additional Information

BRAVIA

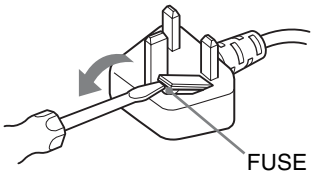
KDL-42EX443 / 42EX440 / 32EX343 / 32EX340

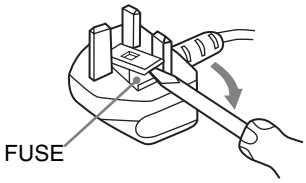
NOTICE FOR CUSTOMERS IN THE UNITED KINGDOM

A moulded plug complying with BS1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced with the same rating of fuse approved by ASTA or BSI to BS 1362 (i.e., marked with ⓐ or ♡) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.





How to replace the fuse

Open the fuse compartment with a blade screwdriver, and replace the fuse.
Please refer to the illustration that actually equipped with the product.

Introduction

Thank you for choosing this Sony product.

Before operating the TV, please read this manual thoroughly and retain it for future reference.

Notice for Digital TV function

- Any functions related to Digital TV (DVB) will only work in countries or areas where DVB-T/DVB-T2* (MPEG-2 and H.264/MPEG-4 AVC) digital terrestrial signals are broadcast or where you have access to a compatible DVB-C (MPEG-2 and H.264/MPEG-4 AVC) cable service. Please confirm with your local dealer if you can receive a DVB-T/DVB-T2* signal where you live or ask your cable provider if their DVB-C cable service is suitable for integrated operation with this TV.
- Your cable provider may charge a fee for their services, or require you to agree to its terms and conditions of business.
- This TV set complies with DVB-T/DVB-T2* and DVB-C specifications, but compatibility with future DVB-T/DVB-T2* digital terrestrial and DVB-C digital cable broadcasts are not guaranteed.
- Some Digital TV functions may not be available in some countries/areas and DVB-C cable may not operate correctly with some providers.

This product has been manufactured by or on behalf of Sony Corporation, 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan. Inquiries related to product compliance based on European Union legislation shall be addressed to the authorized representative, Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters, please refer to the addresses provided in the separate service or guarantee documents.

✍

- The illustrations used in this manual are of the KDL-42EX440 unless otherwise state.

* DVB-T2 is not available for TV model series KDL-42EX440/32EX340.
DVB-T2 is available for TV model series KDL-42EX443/32EX343.

Trademark information

- DVB is a registered trademark of the DVB Project.
- HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.
- Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.
- "BRAVIA" and BRAVIA are trademarks of Sony Corporation.

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

DOLBY
DIGITAL PLUS
PULSE

Location of the identification label

Labels for Model No., Production Date (month/year) and Power Supply rating (in accordance with applicable safety regulation) are located on the rear of the TV or package.

It is recommended that you set "Auto Service Update" to "On", so as to allow new digital services to be added automatically as they become available.

Select "Settings" → "Channel Set-up" → "Digital Set-up" → "Technical Set-up" → "Auto Service Update".

- It is recommended that you set "Auto Service Update" to "On", so as to allow new digital services to be added automatically as they become available. If set to "Off", new digital services will be notified by an on-screen message and the services will not be automatically added. The availability of this function depends on your region/country. If unavailable, perform "Digital Auto Tuning" to add new services.

Download a more detailed operation manual from the Web!

- Select your country.
- You can download a more detailed operation manual from the Support page.

✍The Web page may change without notice.

http://www.sony-europe.com/myproduct/

Table of Contents

Start-up Guide 4

Safety Information **10**
Precautions **11**
Overview of the remote **13**
Overview of the TV buttons and indicators **15**

Watching TV

Watching TV **16**
Using the Digital Electronic Programme Guide (EPG) DVB **18**
Using the Digital Programme List DVB **19**

Using Optional Equipment

Connecting optional equipment **20**
Viewing pictures from connected equipment **21**
Photo Frame **22**

Using MENU Functions

Navigating through TV Menu **24**

Network Set-up

Preparing a Network **25**
Setting up the Internet Connection **25**

Additional Information

Installing the Accessories (Wall-Mount Bracket) **26**
Specifications **29**
Troubleshooting **31**

DVB : for digital channels only

- Before operating the TV, please read “Safety Information” (page 10). Retain this manual for future reference.
- Instructions about “Installing Wall Mount Bracket” are included within this TV’s instructions manual.

1: Checking the accessories

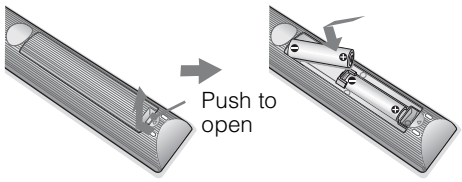
Table-Top Stand (1)

Screws for stand (M5 × 16) (3)

Remote RM-ED049 (1)

Size AA batteries (2)

■ To insert batteries into the remote



✍
- Observe the correct polarity when inserting batteries.
- Do not use different types of batteries together or mix old and new batteries.
- Dispose of batteries in an environmentally friendly way. Certain regions may regulate the disposal of batteries. Please consult your local authority.
- Handle the remote with care. Do not drop or step on it, or spill liquid of any kind onto it.
- Do not place the remote in a location near a heat source, a place subject to direct sunlight, or a damp room.

2: Attaching the stand

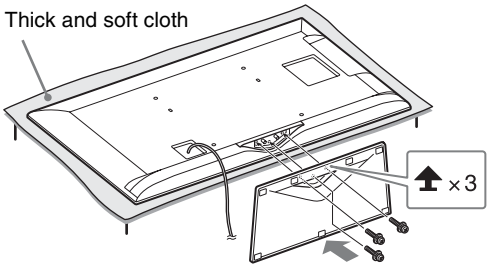
✍
- For best picture quality, do not expose the screen to direct illumination or sunlight.

Follow the assembling steps required to place on a TV stand.

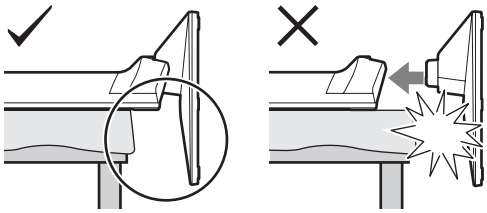
1 Refer to the supplied Table-Top Stand leaflet for proper attachment for some TV models.

2 Place the TV with its screen facing down on a level and stable surface covered with a thick and soft cloth.

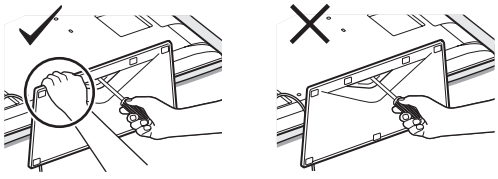
3 Fix the TV to the stand according to the arrow marks ⬆ that guide the screw holes using the supplied screws.



✍
- Be careful not to hit the Table-Top Stand against the edge of the surface when attaching it.



✍
- Hold the Table-Top Stand with one hand to avoid it dropping when attaching.

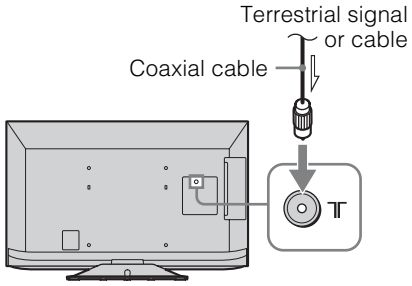


✍
- This TV is very heavy, so two or more people should place the TV onto thick and soft cloth.

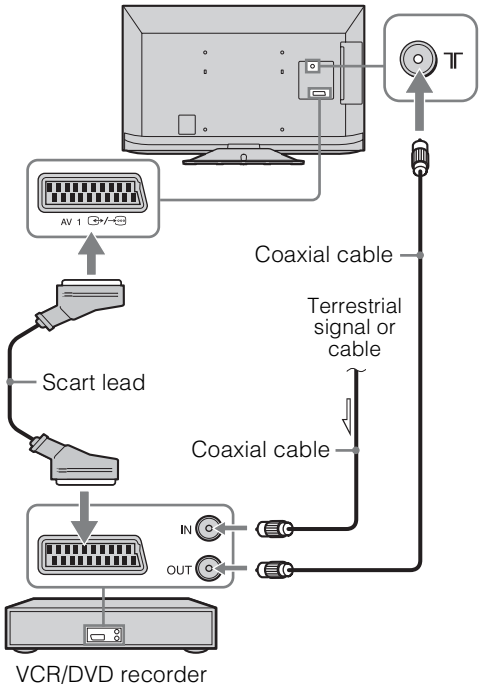
- If using an electric screwdriver, set the tightening torque at approximately 1.5 N·m {15 kgf·cm}.
- Be sure to securely tighten the three supplied screws, otherwise the TV may fall down.
- Use an appropriate screwdriver to attach the screws tightly without damaging the screw head.
- Please ensure the AC power cord is away from the stand installation location when you attach the stand.
- Do not touch the inner side of the bottom of the TV stand to avoid being hurt.

3: Connecting an aerial/cable/ VCR/DVD recorder

Connecting an aerial/cable only

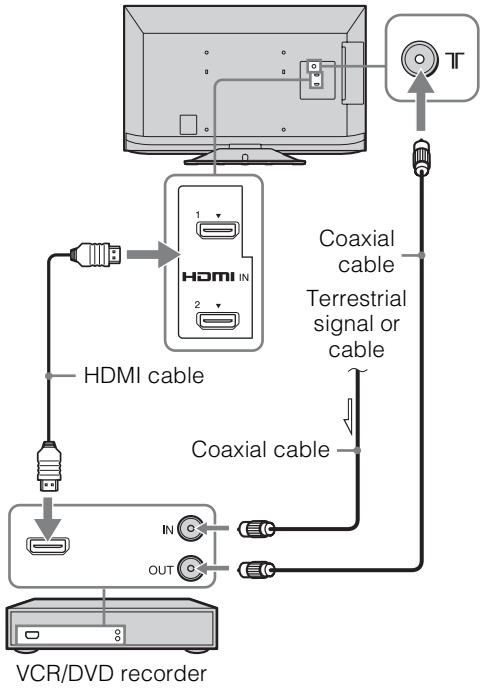


Connecting an aerial/cable/VCR/DVD recorder with SCART

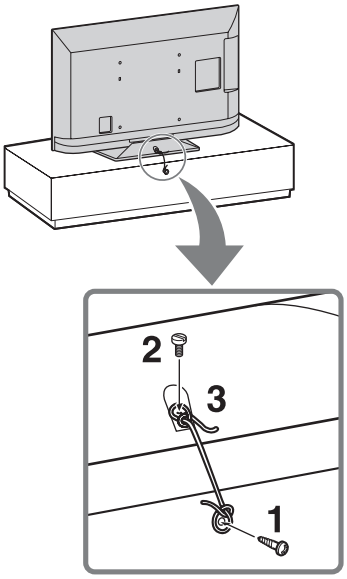


(Continued)

Connecting an aerial/cable/VCR/DVD recorder with HDMI



4: Preventing the TV from toppling over

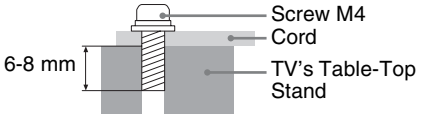


1 Install a wood screw (4 mm in diameter, not supplied) in the TV stand.

2 Install a machine screw (M4, not supplied) into the screw hole of the TV.

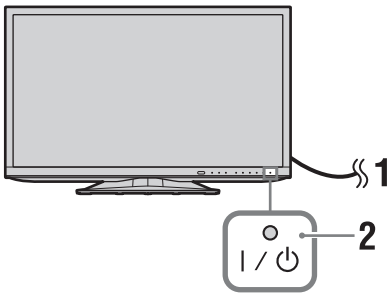
3 Tie the wood screw and the machine screw with a strong cord (not supplied).

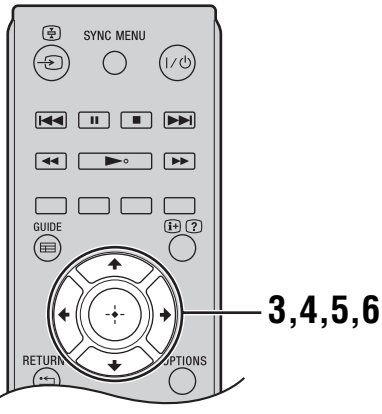
The length of the M4 machine screw differs depending on the cord diameter. Please refer to below illustration.



- An optional Sony support belt kit is used to secure the TV. Contact your nearest Sony Service Centre to purchase a kit. Have your TV model name ready for reference.

5: Selecting the language, country/region and location





1 Connect the TV to your mains socket (220-240V AC, 50Hz).

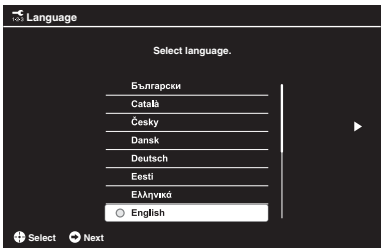
2 Touch I/⏻ on the front of the TV.

When you turn on the TV for the first time, the Language menu appears on the screen.

✍

- When you turn on the TV, the power indicator lights up in green.

3 Press ⇧/⇩ to select the language displayed on the menu screens, then press ⊕ .



4 Follow the on-screen instructions to select the country/region in which you will operate the TV.

If the country/region which you want to use on the TV does not appear in the list, select "-" instead of a country/region.

5 Follow the on-screen instructions to set the PIN code.

💡

- Any PIN code can be used, except 0000.

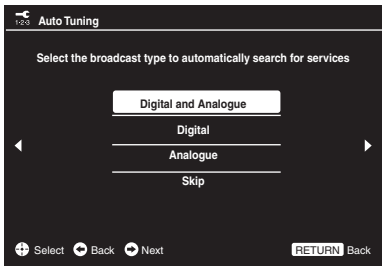
6 Follow the on-screen instructions to select the location type in which you will operate the TV.

This option selects the initial picture mode appropriate for the typical lighting condition in these environments.

In Shop mode, some settings will be periodically reset for Shop usage.

6: Auto-tuning the TV

1 Press ⇧/⇩ to select the broadcast type, then press ⊕.



2 Press ⇧/⇩ to select “Antenna” or “Cable”, then press ⊕.

Select “Antenna” to receive terrestrial TV broadcasting by an external antenna. Select “Cable” if you are a Cable TV subscriber not using an external set-top box.

If you select “Cable”, the screen for selecting the scan type appears. See “To tune the TV for Cable connection” (page 8). The TV then starts searching for all available digital channels, followed by all available analogue channels. This may take some time, so do not press any buttons on the TV or remote while proceeding.

✍

- In some countries, you may select “Antenna” instead of “Cable” to receive Cable TV programmes.

If a message appears for you to confirm the aerial connection

No digital or analogue channels were found. Check all the aerial/cable connections and press ⊕ to start auto-tuning again.

3 Programme Sorting (Only in analogue mode): Changes the order in which the analogue channels are stored on the TV.

❶ Press ⇧/⇩ to select the channel you want to move to a new position, then press ⇨.

❷ Press ⇧/⇩ to select the new position for your channel, then press ⊕.

If you do not change the order in which the analogue channels are stored on the TV, press **HOME** to go to next step.

✍

- This step will appear if any analogue channel is found.

4 Set the current day and time.

✍

- This step will appear only if clock has not been obtained from digital broadcasting.

The message “Set-up complete” will appear on the screen. Press ⊕.
The TV has now tuned in all the available channels.

💡

- USB System Update
  You can update the TV system using USB memory. Obtain information from the website below.
  http://support.sony-europe.com/TV/

To tune the TV for Cable connection

1 Press ⊕ and ⇧/⇩ to select “Quick Scan” or “Full Scan”, then press ⊕.

“Quick Scan” : channels are tuned according to the cable operator information within the broadcast signal.
Recommended setting for “Frequency” and “Network ID” is “Auto”.
This option is recommended for fast tuning when supported by your cable operator.
If the “Quick Scan” does not tune, please use the “Full Scan” method below.
“Full Scan” : All available channels are tuned and stored. This procedure may take some time.
This option is recommended when “Quick Scan” is not supported by your cable provider.

2 Press ⇩ to select “Start”.

The TV starts searching for channels. Do not press any buttons on the TV or remote.

✍

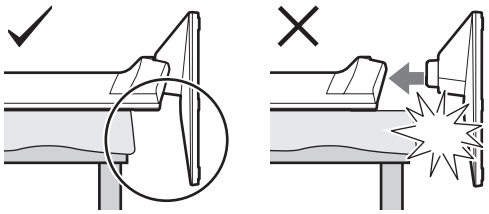
- Some cable providers do not support “Quick Scan”. If no channels are detected using “Quick Scan”, perform “Full Scan”.

Detaching the Table-Top Stand from the TV

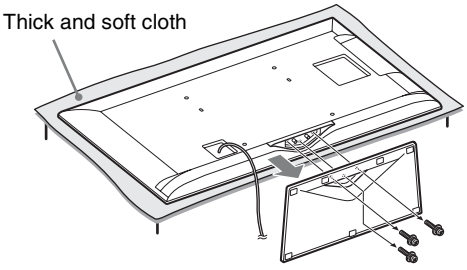
- Do not remove the Table-Top Stand for any reason other than to wall-mount the TV.

1 Place the TV with its screen facing down on a level and stable surface covered with a thick and soft cloth.

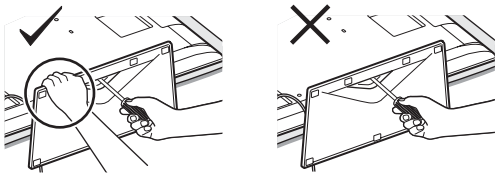
- Be careful not to hit the Table-Top Stand against the edge of the surface when placing the TV with its screen facing down.



2 Remove the screws guided by the arrow marks ⬆ of the TV. Do not remove any other screws.



- Hold the Table-Top Stand with one hand to avoid it dropping when detaching.



- Be sure the TV is on the vertical position before switching on. TV set must not be powered on with LCD panel face down to avoid uneven picture uniformity.

Safety Information

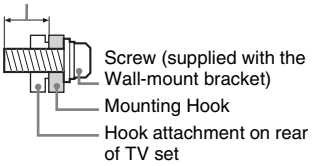
Installation/Set-up

Install and use the TV set in accordance with the instructions below in order to avoid any risk of fire, electrical shock or damage and/or injuries.

Installation

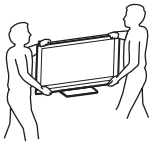
- The TV set should be installed near an easily accessible mains socket.
- Place the TV set on a stable, level surface.
- Only qualified service personnel should carry out wall installations.
- For safety reasons, it is strongly recommended that you use Sony accessories, including:
  - Wall-mount bracket SU-WL500 (KDL-42EX443/42EX440)
  - Wall-mount bracket SU-WL100 (KDL-32EX343/32EX340)
- Be sure to use the screws supplied with the Wall-mount bracket when attaching the mounting hooks to the TV set. The supplied screws are designed as indicated by illustration when measured from the attaching surface of the mounting hook. The diameter and length of the screws differ depending on the Wall-mount bracket model. Use of screws other than those supplied may result in internal damage to the TV set or cause it to fall, etc.

32 TV: 6.5mm ~ 10mm
42 TV: 8mm ~ 12mm

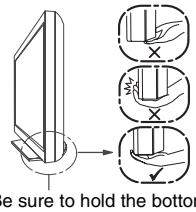


Transporting

- Before transporting the TV set, disconnect all cables.
- Two or three people are needed to transport a large TV set.
- When transporting the TV set by hand, hold it as shown in the illustration. Do not put stress on the LCD panel and the frame around the screen.



- When lifting or moving the TV set, hold it firmly from the bottom.



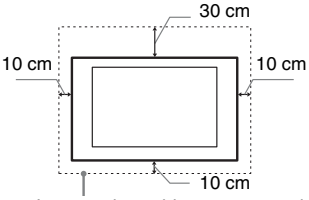
Be sure to hold the bottom of the panel, not the front part.

- When transporting the TV set, do not subject it to jolts or excessive vibration.
- When transporting the TV set for repairs or when moving, pack it using the original carton and packing material.

Ventilation

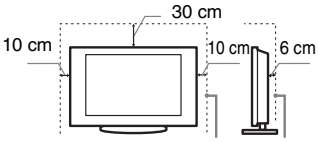
- Never cover the ventilation holes or insert anything in the cabinet.
- Leave space around the TV set as shown below.
- It is strongly recommended that you use a Sony wall-mount bracket in order to provide adequate air-circulation.

Installed on the wall



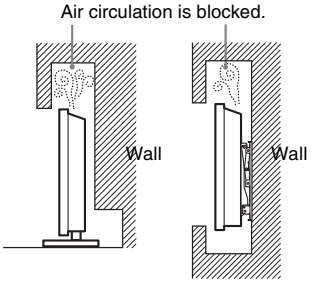
Leave at least this space around the set.

Installed with stand



Leave at least this space around the set.

- To ensure proper ventilation and prevent the collection of dirt or dust:
  - Do not lay the TV set flat, install upside down, backwards, or sideways.
  - Do not place the TV set on a shelf, rug, bed or in a closet.
  - Do not cover the TV set with a cloth, such as curtains, or items such as newspapers, etc.
  - Do not install the TV set as shown below.



Mains lead

Handle the mains lead and socket as follows in order to avoid any risk of fire, electrical shock or damage and/or injuries:

- Use only mains leads supplied by Sony, not other suppliers.
- Insert the plug fully into the mains socket.
- Operate the TV set on a 220–240 V AC supply only.
- When wiring cables, be sure to unplug the mains lead for your safety and take care not to catch your feet on the cables.
- Disconnect the mains lead from the mains socket before working on or moving the TV set.
- Keep the mains lead away from heat sources.
- Unplug the mains plug and clean it regularly. If the plug is covered with dust and it picks up moisture, its insulation may deteriorate, which could result in a fire.

Notes

- Do not use the supplied mains lead on any other equipment.
- Do not pinch, bend, or twist the mains lead excessively. The core conductors may be exposed or broken.
- Do not modify the mains lead.
- Do not put anything heavy on the mains lead.
- Do not pull on the mains lead itself when disconnecting the mains lead.
- Do not connect too many appliances to the same mains socket.
- Do not use a poor fitting mains socket.

Prohibited Usage

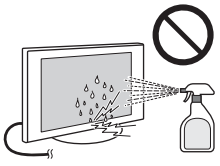
Do not install/use the TV set in locations, environments or situations such as those listed below, or the TV set may malfunction and cause a fire, electrical shock, damage and/or injuries.

Location:

- Outdoors (in direct sunlight), at the seashore, on a ship or other vessel, inside a vehicle, in medical institutions, unstable locations, near water, rain, moisture or smoke.
- If the TV is placed in the changing room of a public bath or hot spring, the TV may be damaged by airborne sulfur, etc.

Cleaning:

Do not spray water or detergent directly on the TV set. It may drip to the bottom of the screen or exterior parts and get inside, resulting in a malfunction.



Environment:

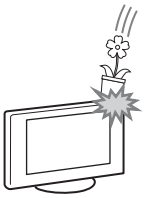
- Places that are hot, humid, or excessively dusty; where insects may enter; where it might be exposed to mechanical vibration, near flammable objects (candles, etc). The TV set shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the TV.
- Do not place the TV in a humid or dusty space, or in a room with oily smoke or steam (near cooking tables or humidifiers). Fire, electric shock, or warping may result.

Situation:

- Do not use when your hands are wet, with the cabinet removed, or with attachments not recommended by the manufacturer. Disconnect the TV set from mains socket and aerial during lightning storms.
- Do not install the TV so that it sticks out into an open space. Injury or damage from a person or object bumping into the TV may result.

Broken pieces:

- Do not throw anything at the TV set. The screen glass may break by the impact and cause serious injury.
- If the surface of the TV set cracks, do not touch it until you have unplugged the mains lead. Otherwise electric shock may result.
- Do not subject the LCD screen to any strong impact or shock. The screen glass may crack or shatter and cause injury.



When not in use

- If you will not be using the TV set for several days, the TV set should be disconnected from the mains for environmental and safety reasons.
- As the TV set is not disconnected from the mains when the TV set is just turned off, pull the plug from the mains to disconnect the TV set completely.
- However, some TV sets may have features that require the TV set to be left in standby to work correctly.

For children

- Do not allow children to climb on the TV set.
- Keep small accessories out of the reach of children, so that they are not mistakenly swallowed.

If the following problems occur...

Turn off the TV set and unplug the mains lead immediately if any of the following problems occur.

Ask your dealer or Sony service centre to have it checked by qualified service personnel.

When:

– Mains lead is damaged.
– Poor fitting of mains socket.
– TV set is damaged by being dropped, hit or having something thrown at it.
– Any liquid or solid object falls through openings in the cabinet.

Warning

To prevent the spread of fire, keep candles or other open flames away from this product at all time.

Precautions

Viewing the TV

- View the TV in moderate light, as viewing the TV in poor light or during long period of time, strains your eyes.
- When using headphones, adjust the volume so as to avoid excessive levels, as hearing damage may result.

LCD Screen

- Although the LCD screen is made with high-precision technology and 99.99% or more of the pixels are effective, black dots may appear or bright points of light (red, blue, or green) may appear constantly on the LCD screen. This is a structural property of the LCD screen and is not a malfunction.
- Do not push or scratch the front filter, or place objects on top of this TV set. The image may be uneven or the LCD screen may be damaged.
- If this TV set is used in a cold place, a smear may occur in the picture or the picture may become dark. This does not indicate a failure. These phenomena disappear as the temperature rises.
- Ghosting may occur when still pictures are displayed continuously. It may disappear after a few moments.
- The screen and cabinet get warm when this TV set is in use. This is not a malfunction.
- The LCD screen contains a small amount of liquid crystal. Follow your local ordinances and regulations for disposal.

Handling and cleaning the screen surface/cabinet of the TV set

Be sure to unplug the mains lead connected to the TV set from mains socket before cleaning.

To avoid material degradation or screen coating degradation, observe the following precautions.

- To remove dust from the screen surface/cabinet, wipe gently with a soft cloth. If dust is persistent, wipe with a soft cloth slightly moistened with a diluted mild detergent solution.
- Do not spray water or detergent directly on the TV set. It may drip to the bottom of the screen or exterior parts, and may cause a malfunction.
- Never use any type of abrasive pad, alkaline/acid cleaner, scouring powder, or volatile solvent, such as alcohol, benzene, thinner or insecticide. Using such materials or maintaining prolonged contact with rubber or vinyl materials may result in damage to the screen surface and cabinet material.
- Periodic vacuuming of the ventilation openings is recommended to ensure to proper ventilation.

(Continued)

- When adjusting the angle of the TV set, move it slowly so as to prevent the TV set from moving or slipping off from its table stand.

Optional Equipment

- Keep optional components or any equipment emitting electromagnetic radiation away from the TV set. Otherwise picture distortion and/or noisy sound may occur.
- This equipment has been tested and found to comply with the limits set out in the EMC Directive using a connection signal cable shorter than 3 meters.

Caution about handling the remote control

- Observe the correct polarity when inserting batteries.
- Do not use different types of batteries together or mix old and new batteries.
- Dispose of batteries in an environmentally friendly way. Certain regions may regulate the disposal of batteries. Please consult your local authority.
- Handle the remote with care. Do not drop or step on it, or spill liquid of any kind onto it.
- Do not place the remote in a location near a heat source, a place subject to direct sunlight, or a damp room.

Disposal of the TV set

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Disposal of waste batteries (applicable in the European Union and other European countries with separate collection systems)

This symbol on the battery or on the packaging indicates that the battery provided with this product shall not be treated as household waste. On certain batteries this symbol might be used in combination with a chemical symbol. The chemical symbols for mercury (Hg) or lead (Pb) are added if the battery contains more than 0.0005% mercury or 0.004% lead. By ensuring these batteries are disposed of correctly, you will help prevent potentially negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of the battery. The recycling of the materials will help to conserve natural resources. In case of products that for safety, performance or data integrity reasons require a permanent connection with an incorporated battery, this battery should be replaced by qualified service staff only. To ensure that the battery will be treated properly, hand over the product at end-of-life to the applicable collection point for the recycling of electrical and electronic equipment. For all other batteries, please view the section on how to remove the battery from the product safely. Hand the battery over to the applicable collection point for the recycling of waste batteries. For more detailed information about recycling of this product or battery, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

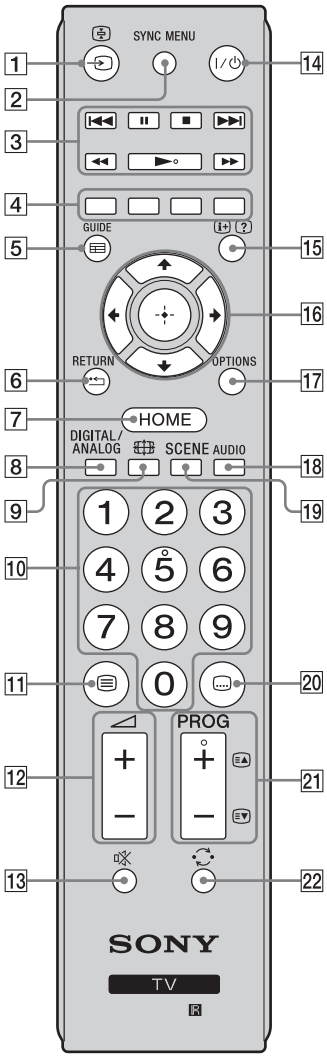
About LCD Monitor Temperature

When the LCD Monitor is used for an extended period, the panel surrounds become warm. You may feel hot when touching there by the hand.

WARNING

Batteries must not be exposed to excessive heat such as sunshine, fire or the like.

Overview of the remote



1 **/ – (Input select)**
- In TV mode: Press to display a list of inputs.

2 **SYNC MENU**

Displays the menu of connected HDMI equipment. While viewing other input screens or TV programmes, “HDMI Device Selection” is displayed when the button is pressed.

- “Control for HDMI” (BRAVIA Sync) is only available with the connected Sony equipment that has the BRAVIA Sync or BRAVIA Theatre Sync logo or is compatible with Control for HDMI.

3 **BRAVIA Sync**

/ / / / / / / : You can operate the BRAVIA Sync-compatible equipment that is connected to the TV.

4 **Coloured buttons (page 17, 19)**

5 **GUIDE / – EPG (Digital Electronic Programme Guide) (page 18)**

6 **RETURN /**

Returns to the previous screen of any displayed menu.

7 **HOME (page 24)**

8 **DIGITAL – Digital mode (page 16)**

ANALOG – Analogue mode (page 16)

9 **– Screen mode (page 17)**

10 **Number buttons**
- In TV mode: Selects channels. For channel numbers 10 and above, press the second and third digit in quick succession.
- In Text mode: Enters the three digit page number to select the page.

11 **– Text (page 17)**

12 **+/– – Volume**

13 **– Mute the sound**

14 **I/ – TV standby**

Turns the TV on and off from standby mode.

15 **/ – Info/Text reveal**
- In digital mode: Displays brief details of the programme currently being watched.
- In analogue mode: Displays information such as current channel number and screen format.
- In Text mode (page 17): Reveals hidden information (e.g. answers to a quiz).

16 **/ / / / /⊕**
- In digital mode: Press ⊕ to add channel to the empty Favourite list or display Favourite list.

17 **OPTIONS**

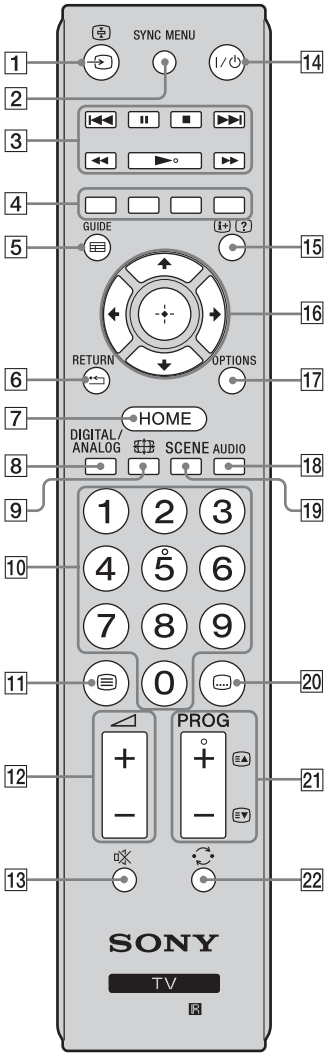
Press to display a list that contains shortcuts to some setting menus. The listed options vary depending on the current input and content.

18 **AUDIO**

Press to change the dual sound mode.

19 **SCENE – Scene Select mode (page 17)**

(Continued)



20 **– Subtitle setting**

Press to change the subtitle language (in digital mode and USB Video mode only).

21 **PROG +/–/ / **

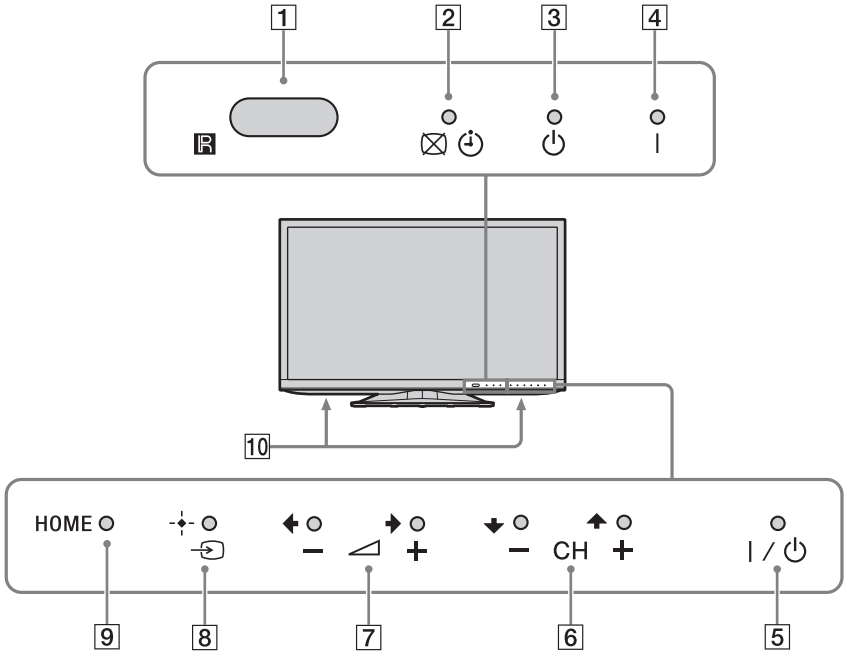
- In TV mode: Selects the next (+) or previous (-) channel.
- In Text mode (page 17): Selects the next ( ) or previous ( ) page.

22 **– Previous channel**

Press to return to the channel or external input that was last viewed (for more than 15 seconds).

- The number 5, ►, **PROG +** and **AUDIO** buttons have tactile dots. Use the tactile dots as references when operating the TV.

Overview of the TV buttons and indicators



1 Light sensor

Do not put anything over the sensor, doing so may affect its function.

Remote control sensor

- Receives IR signals from the remote.
- Do not put anything over the sensor, as its function may be affected.

2 ⊠ ⏲ – Picture Off / LED Timer indicator

- Lights up in green when the picture is switched off.
- Lights up in orange when the sleep timer is set or the TV is in photo frame mode. If you set to “On Timer”, lights up in orange while the TV is also in standby mode.

3 ⏻ – Standby indicator

Lights up in red when the TV is in standby mode.

4 I – Power indicator

Lights up in green when the TV is turned on.

5 I/⏻ – Power

Turns the TV on or off.

✍

- To disconnect the TV completely, pull the plug from the mains.
- When you turn on the TV, the power indicator lights in green.

6 CH +/–/↑/↓

- In TV mode: Selects the next (+) or previous (-) channel.
- In TV menu: Moves through the options up (↑) or down (↓).

7 +/–/→/←

- In TV mode: Increases (+) or decreases (-) the volume.
- In TV menu: Moves through the options right (→) or left (←).

8 ⏎/⊕ – Input select / OK

- In TV mode: Selects the input source from equipment connected to the TV sockets (page 21).
- In TV menu: Selects the menu or option, and confirms the setting.

9 HOME (page 24)

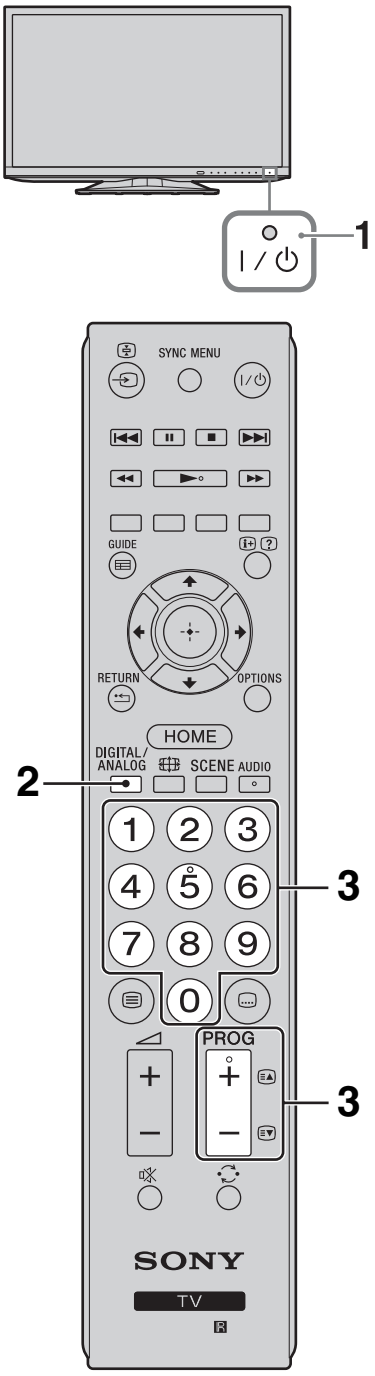
✍

- Make sure that the TV is completely turned off before unplugging the mains lead. Unplugging the mains lead while the TV is turned on may cause the indicator to remain lit or may cause the TV to malfunction.

10 Speaker

- Outputs audio signal.

Watching TV



1 Touch I/⏻ on the front of the TV to turn on the TV.

When the TV is in standby mode (the ⏻ (standby) indicator on the TV front panel is red), press I/⏻ on the remote to turn on the TV.

2 Press **DIGITAL/ANALOG** to switch between digital and analogue modes.

The channels available vary depending on the mode.

3 Press the number buttons or **PROG +/–** to select a TV channel.

To select channel numbers 10 and above using the number buttons, press the second and third digits in quick succession.

To select a digital channel using the Digital Electronic Programme Guide (EPG), see page 18.

In digital mode

An information banner appears briefly. The following icons may be indicated on the banner.

- : Data service (Broadcast application)
- : Radio service
- : Scrambled/Subscription service
- : Multiple audio languages available
- : Subtitles available
- : Subtitles available for the hearing impaired
- ⑱ : Recommended minimum age for current programme (from 3 to 18 years)
- : Parental Lock
- : Digital Programme Lock

Additional operations

To	Do this
Adjust the volume	Press + (increase)/ - (decrease).
Access the Programme index table (in analogue mode only)	Press ⊕ . To select an analogue channel, press ⇧/⇩, then press ⊕ .

■ To access Text

Press ☰. Each time you press ☰, the display changes cyclically as follows:
Text → Text over the TV picture (mix mode) → No Text (exit the Text service)
To select a page, press the number buttons or ▲/▼.
To reveal hidden information, press ?.

- When four coloured items appear at the bottom of the Text page, Fastext is available. Fastext allows you to access pages quickly and easily. Press the corresponding coloured button to access the page.

Scene Select mode

When you select the desired scene option, the optimum sound quality and picture quality for the selected scene are automatically set.

1 Press **SCENE** on the remote.

2 Press ↑/↓ to select the mode, then press ⊕.

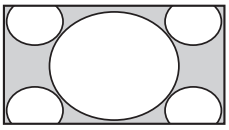
"Auto": Delivers optimum picture and sound quality which is automatically set according to input source. There may not be any effect depending on the connected equipments.
"General": Current user settings.
"Photo": Delivers picture that reproduces the texture and colour of a printed photo.
"Music": Delivers dynamic and clear sound effects like at a concert.
"Cinema": Delivers theatre-like picture and dynamic sound.
"Game": Delivers the best picture and sound quality for fullest game playing enjoyment.
"Graphics": Delivers clearer detailed pictures to reduce fatigue for prolonged viewing.
"Sports": Delivers realistic picture with surround sound like in a stadium.

- Except for "Auto", "General" and "Music", if any scene mode is selected, picture mode selection in the picture menu is not possible - release scene selection first.

■ To change the screen format manually to suit the broadcast

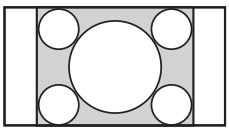
Press ▭ repeatedly to select the desired screen format.

Wide Zoom*



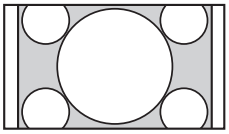
Displays conventional 4:3 broadcasts with an imitation wide screen effect. The 4:3 picture is stretched to fill the screen.

Normal



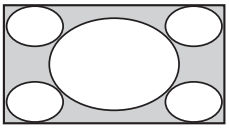
Displays conventional 4:3 broadcasts (e.g. non-wide screen TV) in the correct proportions.

14:9*



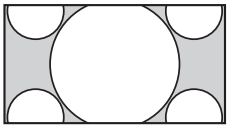
Displays 14:9 broadcasts in the correct proportions. As a result, black border areas are visible on the screen.

Full



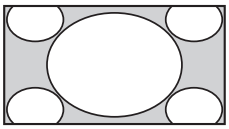
Stretches a 4:3 picture horizontally, to fill a 16:9 screen.

Zoom*



Displays cinemascopic (letter box format) broadcasts in the correct proportions.

Captions*



Displays cinemascopic (letter box format) broadcasts with subtitles on the screen.

* Parts of the top and bottom of the picture may be cut off.

- Depending on the signal, some screen formats may not be selectable.
- Some characters and/or letters at the top and the bottom of the picture may not be visible in "Wide Zoom".

- You can adjust the vertical position of the picture when selecting "Zoom", "14:9" or "Captions". Press ↑/↓ to move up or down (e.g. to read subtitles).

Using the Digital Electronic Programme Guide (EPG) DVB*

Digital Electronic Programme Guide (EPG)

1 In digital mode, press **GUIDE**.

2 Perform the desired operation as shown in the following table or displayed on the screen.

* This function may not be available in some countries/regions.

To	Do this
Watch a programme	Press ⇧/⇩/⇦/⇨ to select the programme or enter the desired programme number by numeric key, then press ⊕.
Turn off the EPG	Press **GUIDE**.

✍

- If an age restriction for programmes has been selected, a message asking for a PIN code will appear on the screen.

Using the Digital Programme List DVB*

Digital Programme List

The Favourite feature allows you to specify up to four lists of your favourite programmes.

1 In digital mode, press **HOME**, and select “Digital Programme List”, then press ⇦/⇨ to select the Favourite list.

- If Favourite list is already selected before, just press ⊕ to access Favourite list.

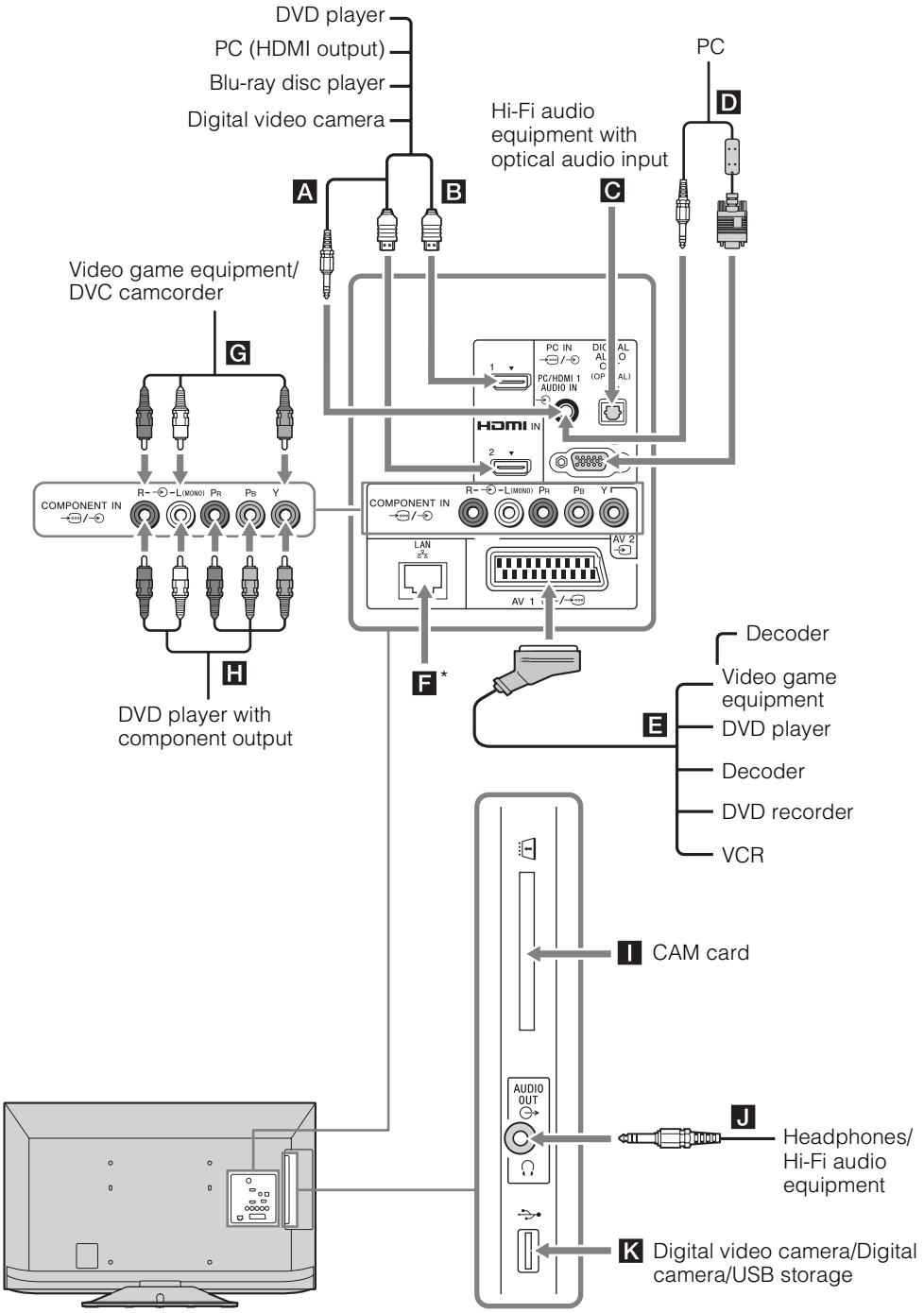
2 Perform the desired operation as shown in the following table or displayed on the screen.

* This function may not be available in some countries/regions.

To	Do this
Create your Favourite list for the first time	**1** Press ⊕ to select “Yes”, or press **OPTIONS** to select “Add to Favourites” in digital mode. **2** Press the yellow button to select the Favourite list. **3** Press ⇧/⇩ to select the channel you want to add, then press ⊕. **4** Press ⇧/⇩ to decide the position and press ⊕ to store. **5** Press **RETURN** to finish setting up.
Watch a channel	**1** Press ⇦/⇨ to select the Favourite list. **2** Press ⇧/⇩ to select the channel, then press ⊕.
Turn off the Favourite list	Press **RETURN**.
Add channels in the currently edited Favourites list	**1** Press the blue button to see Favourite Set-up, or press **OPTIONS** to select “Add to Favourites” in digital mode. **2** Press the yellow button to select the Favourites list you want to edit. **3** Press ⇧/⇩ to select the channel you want to add, the press ⊕. **4** Press ⇧/⇩ to decide the position and press ⊕ to store.
Change the order of channels stored in the Favourites list	**1** Press the blue button to see Favourite Set-up. **2** Press the yellow button to select the Favourites list you want to edit. **3** Press ⊕ or ⇨ to jump to the Favourite list. **4** Press ⇧/⇩ to select the channel you want to change the position, then press ⊕. **5** Press ⇧/⇩ to decide the position and press ⊕ to store.
Remove channels in the currently edited Favourite list	**1** Press the blue button to see Favourite Set-up. **2** Press the yellow button to select the Favourite list you want to edit. **3** Press ⇨ and ⇧/⇩ to select the channel you want to remove, then press ⊕. **4** Press the blue button to remove.
Remove all channels from the current Favourite list	**1** Press the blue button to see Favourite Set-up. **2** Press the yellow button to select the Favourite list you want to edit. **3** Press the blue button. **4** Press ⇦/⇨ to select “Yes”, then press ⊕ to confirm.

Connecting optional equipment

You can connect a wide range of optional equipment to your TV. Connecting cables are not supplied.



* For KDL-42EX443/32EX343 only.

Viewing pictures from connected equipment

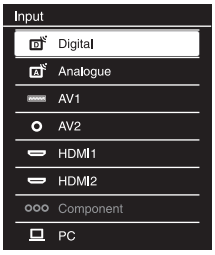
Turn on the connected equipment, then perform one of the following operation.

For an auto-tuned VCR (page 8)

In analogue mode, press **PROG +/–**, or the number buttons, to select the video channel.

For other connected equipment

Press ⏎ to display the connected equipment list. Press ⇧/⇩ to select the desired input source, then press ⊕. (The highlighted item is selected if two seconds pass without any operation after pressing ⇧/⇩.)



Symbol on the screen	Description
HDMI1 or HDMI2	HDMI IN 1 or HDMI IN 2 To see the equipment connected to **A** or **B**. Digital video and audio signals are input from the connected equipment. If the equipment has a DVI socket, connect the DVI socket to the HDMI IN 1 socket through a DVI-HDMI adaptor interface (not supplied), and connect the equipment's audio out sockets to the audio in sockets in the HDMI IN 1 sockets. Connect to the HDMI IN 2 socket, to view photographs or screen images from a PC or digital video camera.
PC	To see the equipment connected to **D**. • It is recommended to use a PC cable with ferrites like the "Connector, D-sub 15" (ref. 1-793-504-11, available in Sony Service Centre), or equivalent.
AV1	To see the equipment connected to **E**.
AV2	To see the equipment connected to **G**. When connecting mono equipment, connect to the ⏎ AV2 L socket.
Component	To see the equipment connected to **H**.

✍
- Be sure to use only an authorised HDMI cable bearing the HDMI logo. We recommend that you use a Sony HDMI cable.
- When HDMI control compatible equipment is connected, communication with the connected equipment is supported.

To connect	Do this
DIGITAL AUDIO OUT (OPTICAL) **C**	Use an optical audio cable.
LAN (For KDL-42EX443/32EX343 only) **F**	Connects to an existing network using an Ethernet cable. Be sure to complete "Network Set-up". ✍ • Available only with model supporting network feature.
Conditional Access Module (CAM) **I**	To use Pay Per View services. For details, refer to the instruction manual supplied with your CAM. Turn off the TV when inserting or removing your CAM. ✍ • CAM is not supported in some countries/regions. Check with your authorised dealer.
Headphones or Hi-Fi audio equipment **J**	Connect with an audio cable or headphones. You can listen to TV sound through your stereo system or headphones. Audio level of the external speakers can be modified by pressing the volume buttons on the remote.

(Continued)

To connect	Do this
USB K	You can enjoy photo/music/video files stored in a Sony digital still camera or camcorder.

Additional operation

To	Do this
Return to normal TV mode	Press **DIGITAL/ANALOG**.

Photo Frame

You can enjoy looking at photos, listening to music or seeing the clock and calendar, at the same time.

You can enter photo frame mode using any of the following methods:

① Press **HOME**, and then select “Photo Frame Mode”.
② Press **OPTIONS**, when you are playing back the photo/music files.

You can switch the frame, e.g. image and clock, full screen image or full screen clock.

■ To select photo

You can select photos from USB memory, using any of the following methods:

① Press **HOME** and select “Settings”, then “Set-up” > “Photo Frame Settings” > “Image Selection”.
Press ⊕ to select the file from thumbnail view.
② In photo frame mode, press **OPTIONS** > “Image Selection”. Press ⊕ to select the file from thumbnail view.
③ Press **HOME**, and select “Photo”. When playing back a photo, press **OPTIONS** > “Photo Frame Mode” to launch “Photo Frame” with the selected photo.

■ To select music

You can select music from USB memory, using any of the following methods:

① Press **HOME** and select “Settings”, then “Set-up” > “Photo Frame Settings” > “Music Selection”.
Press ⊕ to select the file from thumbnail view.
② In photo frame mode, press **OPTIONS** > “Music Selection”.
Press ⊕ to select the file from thumbnail view.

③ Press **HOME**, and select “Music”. When playing back music, press **OPTIONS** > “Photo Frame Mode” to launch “Photo Frame” with the selected music.

■ To select Display mode

You can change the photo frame display by selecting “Display Mode”.

- **Image and Clock**

- **Full Screen Image**

- **Full Screen Clock**

■ To select Clock Display mode

There are five calendar display modes. When the “Display Mode” setting is set to “Image and Clock”, you can set to “Calendar”, “Analogue Clock” or “Digital Clock”. When the “Display Mode” setting is set to “Full Screen Clock”, you can set to “Calendar”, “Calendar and Clock” or “Clock”.

- **Calendar**
- **Analogue Clock**
- **Digital Clock**
- **Calendar and Clock**
- **Clock**

■ Duration

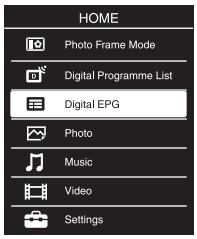
To save power, photo frame mode will shut down after 24 hours of TV with power off automatically. After running photo frame mode for 24 hours, not use this mode for at least one hour, to avoid panel burn-in.
Duration time can be set to “Duration” in “Photo Frame Settings”.

To avoid panel burn-in, the position of the photo, clock and calendar are switched automatically every hour.

Navigating through TV Menu

"MENU" allows you to enjoy various convenient features of this TV. You can easily select channels or inputs sources and change the settings for your TV.

1 Press **HOME**.



2 Press ⇧/⇩ to select an option, then press ⊕.
To exit the menu, press **HOME**.

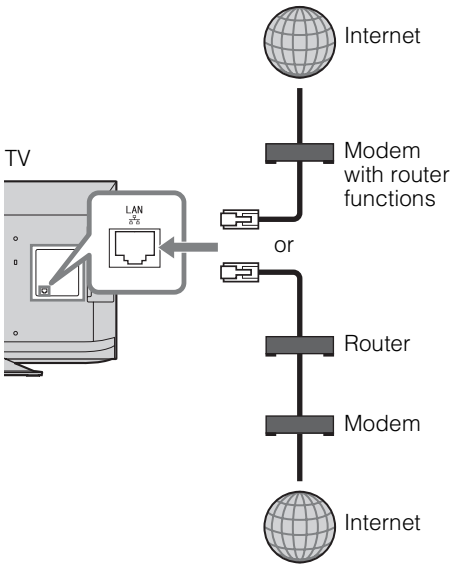
Media category icon		Description
	Photo Frame Mode	You can select the frame image which enables you to enjoy with photo, music and clock. For details, see page 22.
	Digital Programme List	You can select the Digital Programme List (page 19).
	Digital EPG	You can select the Digital Electronic Programme Guide (EPG) (page 18).
	Photo	You can enjoy photo files via USB devices.
	Music	You can enjoy music files via USB devices.
	Video	You can enjoy video files via USB devices.
	Settings	You can make advanced settings and adjustments.

✍
- The options you can adjust vary depending on the situation.
- Unavailable options are greyed out or not displayed.

Preparing a Network

When you connect this TV to the Internet, you can receive additional content/services provided by the MHEG Internet Connected Services feature.

- You will need to contract with an Internet service provider to connect to the Internet.
- Available only with model supporting Ethernet connector.



Setting up the Internet Connection

Using the network feature you can connect the TV to the Internet. The setup procedure differs depending on the type of network and LAN router. Before setting up the Internet connection, be sure to set up a LAN router.

- For LAN connections, use a Category 5 cable (not supplied).
- This TV supports additional content/services provided by the MHEG Internet Connected Services feature. General Internet (IPTV/Web service/e-mail, etc.) is not supported by this TV.

■ Network Set-up

The items that need to be set (e.g. IP Address, Subnet Mask, DHCP) may differ depending on the Internet service provider or router. For details, refer to the instruction manuals provided by your Internet service provider, or those supplied with the router.

1. Press **HOME**, then select “Settings” > “Set-up” > “Network Set-up”.
2. Select “IP Address Setting”.
3. Select “Auto” to set the IP Address automatically, or “Manual” to set them manually.
4. Follow the instructions on the setup screen.

■ To view the network status

You can confirm your network status.

1. Press **HOME**, then select “Settings” > “Set-up” > “Network Set-up”.
2. Select “Status”.

■ If you cannot connect to the Internet

Use the diagnostic to check possible causes for network connection failures, and settings.

1. Press **HOME**, then select “Settings” > “Set-up” > “Network Set-up”.
2. Select “Check Connection”.
   This may take several minutes. You can cancel the diagnostic by pressing **RETURN**.

Installing the Accessories (Wall-Mount Bracket)

■ **To Customers:**
For product protection and safety reasons, Sony strongly recommends that installing of your TV be performed by Sony dealers or licensed contractors. Do not attempt to install it yourself.

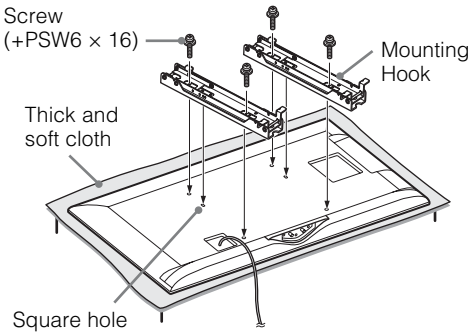
■ **To Sony Dealers and Contractors:**
Provide full attention to safety during the installation, periodic maintenance and examination of this product.

Your TV can be installed using the Wall-Mount Bracket SU-WL500 or SU-WL100 (sold separately).

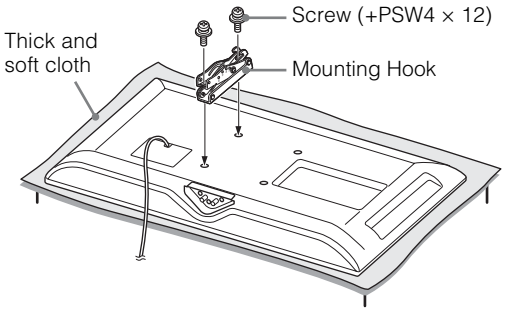
- Refer to the Instructions supplied with the Wall-Mount Bracket to properly carry out the installation.
- Refer to “Detaching the Table-Top Stand from the TV” (page 9).

✍
- Place the TV with its screen facing down on a level and stable surface covered with a thick and soft cloth, when securing the Mounting Hook.

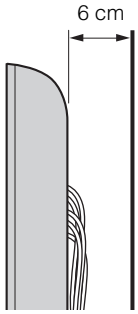
SU-WL500 (KDL-42EX443/42EX440)



SU-WL100 (KDL-32EX343/32EX340)



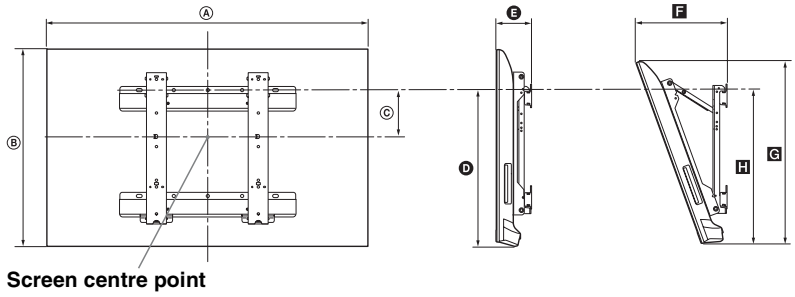
Note when installing
When using the SU-WL500 or SU-WL100 Wall-Mount Bracket, the space between the wall and the TV will be 6 cm. Use this space to route cables to the TV.



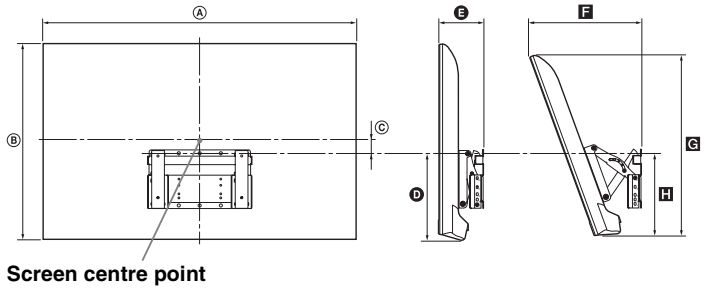
Sufficient expertise is required for installing this product, especially to determine the strength of the wall for withstanding the TV's weight. Be sure to entrust the attachment of this product to the wall to Sony dealers or licensed contractors and pay adequate attention to safety during the installation. Sony is not liable for any damage or injury caused by mishandling or improper installation.

TV installation dimensions table

SU-WL500 (KDL-42EX443/42EX440)



SU-WL100 (KDL-32EX343/32EX340)



Unit: cm

Model Name	Display dimensions		Screen centre dimension	Length for each mounting angle				
				Angle (0°)		Angle (20°)		
	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	F	G	H
KDL-42EX443 KDL-42EX440	98.3	60.3	14.3	45.7	11.1	28.7	55.6	46.6
KDL-32EX343 KDL-32EX340	75.3	47.1	3.9	20.8	10.8	26.9	43.2	19.2

Figures in the above table may differ slightly depending on the installation.

WARNING

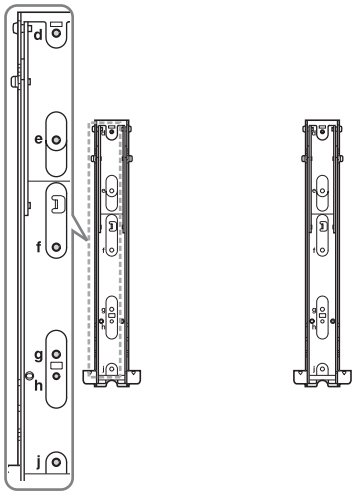
The wall that the TV will be installed on should be capable of supporting a weight of at least four times that of the TV. Refer to "Specifications" (page 29) for its weight.

Screw and Hook locations diagram/table

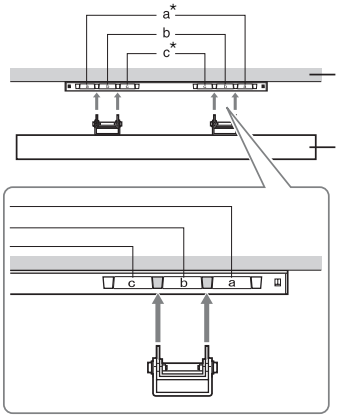
SU-WL500 (KDL-42EX443/42EX440)

Model Name	Screw location	Hook location
KDL-42EX443 KDL-42EX440	e, j	b

Screw location



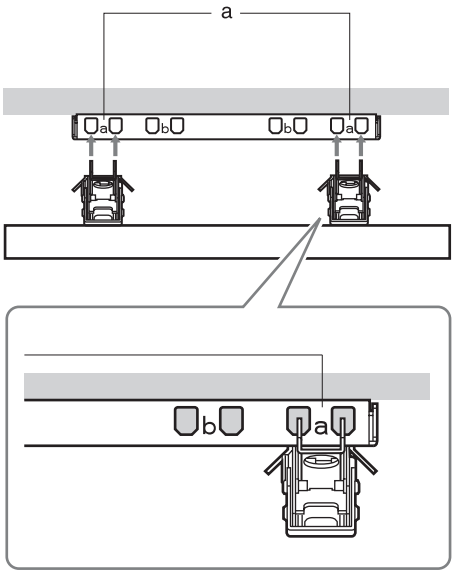
Hook location



* Hook location “a” and “c” cannot be used for the models.

SU-WL100 (KDL-32EX343/32EX340)

TV Model	Hook location
KDL-32EX343 KDL-32EX340	a



Specifications

System	
Panel System	LCD (Liquid Crystal Display) Panel LED Back Light
TV System	Depending on your country/region selection Analogue: B/G, D/K, L, I Digital: DVB-T, DVB-T2 (KDL-42EX443/32EX343 only), DVB-C
Colour/Video System	Analogue: PAL, PAL60 (only video input), SECAM, NTSC3.58, NTSC4.43 (only video input) Digital: MPEG-2 MP@ML/HL, H.264/MPEG-4 AVC HP@L4.0, MP@L4.0
Channel Coverage	Analogue: 46.25 - 855.25 MHz Digital: VHF/UHF
Sound Output	8 W + 8 W
Input/Output jacks	
Aerial/Cable	75 ohm external terminal for VHF/UHF
/ AV1	21-pin scart connector including audio/video input, RGB input, S-Video input, and TV audio/video output.
COMPONENT IN/ AV2	COMPONENT IN Supported formats: 1080p, 1080i, 720p, 576p, 576i, 480p, 480i Y: 1 Vp-p, 75 ohms, 0.3V negative sync/P_B/C_B: 0.7 Vp-p, 75 ohms/P_R/C_R: 0.7 Vp-p, 75 ohms AV2 Video input (phono jacks)
COMPONENT IN/ AV2	Audio input (phono jacks)
HDMI IN 1, 2	Video: 1080p, 1080/24p, 1080i, 720p, 576p, 576i, 480p, 480i Audio: Two channel linear PCM 32, 44.1 and 48 kHz, 16, 20 and 24 bits, Dolby Digital PC (see page 30) Analogue audio (minijack) (HDMI 1 only)
DIGITAL AUDIO OUT (OPTICAL)	Digital optical jack (Two channel linear PCM, Dolby Digital)
AUDIO OUT,	Audio output (Left/Right), Headphones (minijack)
PC IN	PC Input (15 D-sub) (see page 30) G: 0.7 Vp-p, 75 ohms, non Sync on Green/B: 0.7 Vp-p, 75 ohms/ R: 0.7 Vp-p, 75 ohms, H/V Sync: TTL level PC audio input (minijack)
	USB port
	CAM (Conditional Access Module) slot
LAN (For KDL-42EX443/ 32EX343 only)	10BASE-T/100BASE-TX connector (Depending on the operating environment of the network, connection speed may differ. 10BASE-T/100BASE-TX communication rate and communication quality are not guaranteed for this TV.)

Model name KDL-		**42EX443/42EX440**	**32EX343/32EX340**
Power and others			
Power Requirements		220–240 V AC, 50 Hz	
Energy Efficiency Class		A	
Screen Size (measured diagonally)		Approx. 106.7 cm / 42 inches	Approx. 80.0 cm / 32 inches
Power consumption	in “Home”/ “Standard” mode	71 W	38 W
	in “Shop”/ “Vivid” mode	95 W	55 W
Average annual energy consumption*1		98 kWh	53 kWh
Standby Power Consumption*2		0.3 W	
Display Resolution		1,920 dots (horizontal) × 1,080 lines (vertical)	1,366 dots (horizontal) × 768 lines (vertical)

(Continued)

Model name KDL-		42EX443/42EX440	32EX343/32EX340
Dimensions (w × h × d) (Approx.)	(with stand)	98.3 × 64.3 × 23.3 cm	75.3 × 51.0 × 21.3 cm
	(without stand)	98.3 × 60.3 × 7.5 cm	75.3 × 47.1 × 7.1 cm
Mass (Approx.)	(with stand)	14.3 kg	7.8 kg
	(without stand)	13.4 kg	7.2 kg
Supplied Accessories		Refer to “1: Checking the accessories” on page 4.	
Optional Accessories		See “Installing the Accessories (Wall-Mount Bracket)” on page 26.	

*1 Energy consumption per year, based on the power consumption of the television operating 4 hours per day for 365 days. The actual energy consumption will depend on how the television is used.
*2 Specified standby power is reached after the TV finishes necessary internal processes.

Design and specifications are subject to change without notice.

■ PC Input Signal Reference Chart for PC IN and HDMI IN 1/2

For KDL-42EX443/42EX440

Signals	Horizontal (Pixel)	Vertical (Line)	Horizontal frequency (kHz)	Vertical frequency (Hz)	Standard
VGA	640	480	31.5	60	VGA
SVGA	800	600	37.9	60	VESA Guidelines
XGA	1024	768	48.4	60	VESA Guidelines
WXGA	1280	768	47.4	60	VESA
WXGA	1280	768	47.8	60	VESA
WXGA	1360	768	47.7	60	VESA
SXGA	1280	1024	64	60	VESA
HDTV	1920	1080	67.5	60	EIA

For KDL-32EX343/32EX340

Signals	Horizontal (Pixel)	Vertical (Line)	Horizontal frequency (kHz)	Vertical frequency (Hz)	Standard
VGA	640	480	31.5	60	VGA
SVGA	800	600	37.9	60	VESA Guidelines
XGA	1024	768	48.4	60	VESA Guidelines
WXGA	1280	768	47.4	60	VESA
WXGA	1280	768	47.8	60	VESA
WXGA	1360	768	47.7	60	VESA

- This TV's PC input does not support Sync on Green or Composite Sync.
- This TV's PC input does not support interlaced signals.
- This TV's PC input supports signals in the above chart with a 60 Hz vertical frequency.

Troubleshooting

Check whether the ⏻ (standby) indicator is flashing in red.

When it is flashing

The self-diagnosis function is activated. Touch I/⏻ on the front of the TV to turn it off, disconnect the mains lead, and inform your dealer or Sony service centre.

When it is not flashing

1 Check the items in the tables below.

2 If the problem still persists, have your TV serviced by qualified service personnel.

- For further information, please contact Sony Customer Information Centre at the address or telephone that appears on the supplied guarantee.

Picture

No picture (screen is dark) and no sound
- Check the aerial/cable connection.
- Connect the TV to the mains, and touch I/⏻ on the front of the TV.
- If the ⏻ (standby) indicator lights up in red, press I/⏻.

No picture or no menu information from equipment connected to the scart connector
- Press ⏎ to display the connected equipment list, then select the desired input.
- Check the connection between the optional equipment and the TV.

Double images or ghosting
- Check the aerial/cable connection.
- Check the aerial location and direction.

Only snow and noise appear on the screen
- Check if the aerial is broken or bent.
- Check if the aerial has reached the end of its serviceable life (three to five years in normal use, one to two years at the seaside).

Picture or sound noise when viewing a TV channel
- Adjust “AFT” (Automatic Fine Tuning) to obtain better picture reception.

Some tiny black points and/or bright points appear on the screen
- The picture of a display unit is composed of pixels. Tiny black points and/or bright points (pixels) on the screen do not indicate a malfunction.

No colour on programmes
- Select “Reset”.

No colour or irregular colour when viewing a signal from the COMPONENT IN/AV2 sockets
- Check the connection of the COMPONENT IN/AV2 sockets and check if each sockets are firmly seated in their respective sockets.

Sound

No sound, but good picture
- Press + or (Mute).
- Check if the “Speakers” is set to “TV Speakers”.
- When using HDMI input with Super Audio CD or DVD-Audio, DIGITAL AUDIO OUT (OPTICAL) may not output audio signals.

Channels

The desired channel cannot be selected
- Switch between digital and analogue mode and select the desired digital/analogue channel.

Some channels are blank
- Scrambled/Subscription only channel. Subscribe to the pay TV service.
- Channel is used only for data (no picture or sound).
- Contact the broadcaster for transmission details.

Digital channels are not displayed
- Contact a local installer to find out if digital transmissions are provided in your area.
- Upgrade to a higher gain aerial.

General

The TV turns off automatically (the TV enters standby mode)
- Check if the “Sleep Timer” or “Idle TV Standby” is activated.
- If no signal is received and no operation is performed in the TV mode for 15 minutes, the TV automatically switches to standby mode.
- Check if “Duration” in Photo Frame mode is activated.
- Check if “Duration” is activated when TV is power on by On Timer.
- TV is in PC input with no signal and “PC Power Management” set to “On”, then TV will turn off after 30 sec.

Distorted picture and/or sound
- Keep the TV away from electrical noise sources such as cars, motorcycles, hair-dryers or optical equipment.
- When installing optional equipment, leave some space between the optional equipment and the TV.
- Check the aerial/cable connection.
- Keep the aerial/cable TV cable away from other connecting cables.

The remote does not function
- Replace the batteries.

(Continued)

HDMI equipment does not appear on “HDMI Device List”

- Check that your equipment is compatible with control for HDMI.

If “Store Display Mode: On” is displayed on the screen

- Your TV is set to “Shop” mode. You need to set “Home” for “Location” in the “Auto Start-up” procedure again (page 7).

No Cable TV services (programmes) found by “Digital Auto Tuning”.

- Check your cable connection or your tuning configuration.
- Attempt the “Digital Auto Tuning” by selecting the “Antanna” instead of “Cable”.

For useful information about Sony products

http://www.sony-europe.com/myproduct/

4-433-082-**12**(1)

http://www.sony.net/

© 2012 Sony Corporation